



ELECTROLUMINESCENT P-N JUNCTION DEVICE

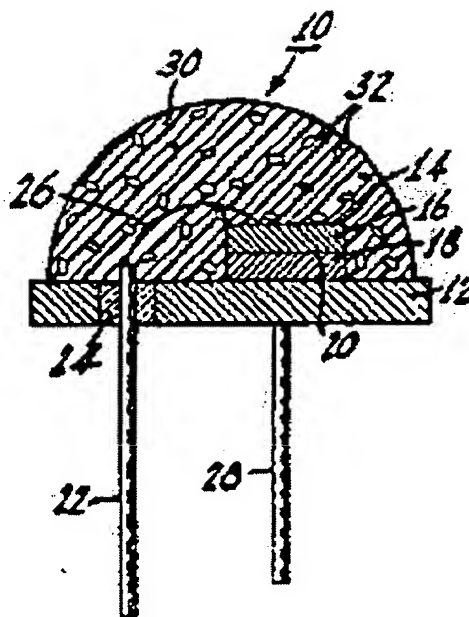
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Abstract not available for DE2059909
 Abstract of correspondent: **GB1332462**

1332462 Electroluminescence RCA COR-
 PORATION 4 Dec 1970 [12 Dec 1969] 57842/70
 Heading C4S An electroluminescent device 10
 for emitting radiation outside the visible spectrum com-
 prises PN EL semi conductor element 14
 emitting radiation outside the visible spectrum,
 encapsulant 30 transparent to the radiation from
 the s/c. element and to radiation within the visible
 spectrum and means, comprising phosphor
 particles 32 converting a small portion of the non-
 visible radiation to visible radiation as an
 indication that the device is emitting non- visible
 radiation. Phosphor 32 may emit visible light by a
 two or three photon absorption process and the
 particles may be in amount 0A5 to 1% or more by
 wt, of the particle plus en- capsulant mixture. The
 encapsulant may be a hollow dome with the
 phosphor on its interior- surface or dispersed
 within the non-visible radiation in the infra-red
 region and emitted by a PN-injection type s/c.
 element. Support 12 is a flat metal disc, soldered
 s/c. element 14 may be GaAs, InP or an InAs-
 GaAs mix. Washer 24 is an insulator such as
 glass or cer- amic, dome 30 preferably has a high
 refractive index and may be of plastics e.g.
 epoxy, acrylic, polyester, or glycol phthalate
 plastics and low m.p. glasses. Phosphor 32 may
 include ions of rare earth crystals, e.g. Yb and Er
 or Yb and Ho in a host such as LaF 3 , Y 3 OCl
 7 , BaYF 5 or BaLuF 5 .



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